

CLEAN COPY OF THE CLAIMS

B¹ 34. (Amended) A transgenic mouse comprising an isolated DNAC molecule, wherein said DNAC molecule comprises a promoter P and an L1 cassette sequence comprising a core L1 retrotransposon element.

B² 36. (Amended) The transgenic mouse of claim 34, wherein said core L1 retrotransposon element comprises a 5' UTR, ORF1, ORF2 comprising EN and RT domains, a 3' UTR, a poly A signal, and a vector sequence comprising at least one origin of DNA replication and a DNA sequence encoding at least one selectable marker protein.

37. (Amended) The transgenic mouse of claim 34, wherein said promoter P is an RNA pol III promoter or an RNA pol II promoter, said RNA pol II promoter being selected from the group consisting of a constitutive promoter, an inducible promoter, a tissue-specific promoter and a viral promoter.

38. (Amended) The transgenic mouse of claim 36, wherein said origin of DNA replication is a eukaryotic origin of DNA replication.

39. (Amended) The transgenic mouse of claim 38, wherein said isolated DNAC molecule further comprises a prokaryotic origin of DNA replication.

40. (Amended) The transgenic mouse of claim 36, wherein said selectable marker protein is a first marker protein selected from the group consisting of neomycin resistance protein, green fluorescent protein, β -galactosidase, and a prokaryotic antibiotic resistance protein.

41. (Amended) The transgenic mouse of claim 36, wherein said isolated DNAC molecule further comprises a fragment of non-L1 DNA and a promoter P' for expression of said non-L1 DNA, wherein said non-L1 DNA and promoter P' are positioned within said 3' UTR or between said 3' UTR and said poly A signal.

42. (Amended) The transgenic mouse of claim of claim 41, wherein said non-L1 DNA comprises DNA encoding a second marker protein.

43. (Amended) The transgenic mouse of claim 42, wherein said second marker protein is selected from the group consisting of neomycin resistance protein, green fluorescent protein, β -galactosidase, herpes simplex virus thymidine kinase, and a eukaryotic cell surface protein.

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44. (Amended) A sperm cell obtained from a male transgenic mouse, wherein said mouse comprises an isolated DNAC molecule, wherein said DNAC molecule comprises a promoter P and an L1 cassette sequence comprising a core L1 retrotransposon element.

B3

46. (Amended) A transgenic mouse obtained by fertilization of an egg with the sperm of claim 44, wherein said egg is obtained from a female of the same species as said transgenic mouse from which said sperm is obtained.

47. (Amended) A sperm cell obtained from a male transgenic mouse, wherein said mouse comprises an isolated DNAC molecule, said DNAC molecule comprising a promoter P and an L1 cassette sequence comprising a core L1 retrotransposon element, wherein said core L1 retrotransposon element comprises a 5' UTR, ORF1, ORF2 comprising EN and RT domains, a 3' UTR, a poly A signal, and a vector sequence comprising at least one origin of DNA replication and a DNA sequence encoding at least one selectable marker protein.
